

[What is claimed is]

[Claim 1] An amorphous fine silica particle made by flame hydrolysis of a silicon compound, wherein said silica particle having, 0.1 - 0.7 μ m of the average particle diameter (median diameter), 5 - 30m² / g of the specific surface area by BET, and less than 40 of the dispersion coefficient (z) shown in the following formula [1],

$$Z = Y / 2X \quad \cdots [1]$$

,where X is a median size, Y is a particle size range, which is from 10% to 90% of an accumulative particle size.

[Claim 2] The amorphous fine silica particle according to Claim 1, wherein said silica particle is used as a filler of a semiconductor resin-sealing agent.

[Claim 3] The amorphous fine silica particle according to Claim 1, wherein said silica particle is used as a filler for anti-blocking of a plastic film or sheet.

[Claim 4] The amorphous fine silica particle according to Claim 1, wherein said silica particle is used as an outer additional agent for a toner.

[Claim 5] The amorphous fine silica particle according to Claim 1, wherein said silica particle is used for a surface protection layer or an electric charge transportation layer of a photo conductor of an electronic photograph.

[Claim 6] An amorphous fine silica particle made by a flame hydrolysis of a silicon compound, wherein said silica particle having, 0.1 - 0.7 μ m of the average particle diameter (median size),

5 - 30m² / g of the specific surface area by BET,

less than 40 of the dispersion coefficient (z) shown in the following formula [I], and

more than 20μC / m² of the absolute value of triboelectrostatic charge to the specific surface area by BET.

$$Z = Y / 2X \quad \cdots [I]$$

,where X is a median size, Y is a particle size range which is from 10% to 90% of an accumulative particle size.

[Claim 7] The amorphous fine silica particle according to Claim 6, wherein said silica particle is surface-treated with a silane coupling agent and/or organo-polysiloxane.

[Claim 8] The amorphous fine silica particle according to Claim 6, wherein said silica particle is surface-treated by a dry method.

[Claim 9] A development agent for an electronic photograph, wherein said agent uses the amorphous fine silica particle according to Claim 6, Claim 7, or Claim 8.

[Claim 10] A surface protection layer material of a photo conductor, wherein said material uses the amorphous fine silica particle according to Claim 6, Claim 7, or Claim 8.

[Claim 11] A material of electric charge transportation layer, wherein said material uses the amorphous fine silica particle according to Claim 6, Claim 7, or Claim 8.

[Claim 12] A production process of an amorphous fine silica particle by leading a gaseous silicon compound into a flame to be hydrolyzed, the process also comprising,

setting the flame temperature to be more than melting point of silica,
 setting the silica concentration in the flame to be more than 0.25kg / Nm³,
 staying the generated silica particle for a short time under the high
 temperature which is more than melting point of silica, and
 making an amorphous silica particle having 0.1 - 0.7μm of the average
 particle diameter (median size), and 5 - 30m² / g of the specific surface area.

[Claim 13] The production process of an amorphous fine silica particle according to Claim 12,

[Claim 14] The production process of an amorphous fine silica particle according to Claim 12 or Claim 13,

[Claim 15] The production process of an amorphous fine silica particle according to Claim 12, Claim 13, or Claim 14, the process comprising,

$$S = 3.52 (v \cdot t)^{-0.4} \dots\dots[II]$$